

REMARKS

By the foregoing amendment, claim 13 has been amended to conform to a more ideal dependency. Upon entry of this amendment, claim 13 properly depends from claim 11. Applicants note that no new matter has been added.

Currently, the Office has examined claims 1-12, and 33, while claims 13-32 have been withdrawn. For reasons discussed below, Applicants disagree with the withdrawal of claims 13, 14, and 15 and respectfully request that these claims be rejoined with the pending claims.

Formal Matters

Applicants note with appreciation that the Examiner has mostly considered the Information Disclosure Statements submitted October 24, 2005; November 22, 2005; May 24, 2006; and July 14, 2006 and confirmed such consideration by returning signed and initialed copies of the forms PTO-1449. However, the Examiner has not considered a number of Japanese documents, for which an English language family member or abstract was not submitted (see Office Action pgs. 2 and 3).

Applicants will be submitting a Supplemental Information Disclosure Statement, shortly.

Applicants also note that the Action does not indicate whether the certified copies of the priority applications have been received from the International Bureau. Applicants respectfully request that the Examiner review the application regarding the receipt of certified copies of priority documents and respectfully confirm the receipt with the next communication.

Election/Restrictions and Telephone Interview

Applicants thank the Examiner for a telephone conversation on October 27, 2009 with Applicants' representative, Thomas Weber. During the phone conversation, Applicants' representative discussed the restriction requirement of June 10, 2009. More

specifically, the withdrawal of claims 13, 14, and 15 from consideration was discussed, although these claims were included in elected Group I, i.e. claims 1-15, and 33.

The Examiner indicated that Applicant's election of the metal-oxygen bond structures of claims 10 and 12 under the species restriction resulted in the withdrawal of claims 13, 14, and 15. Applicants respectfully disagree with the propriety of this action.

Applicants respectfully submit that the species election of the metal-oxygen bond structures of claims 10 and 12 does not constitute an admission that the claims that contain the alternative species of the metal-oxygen bond structures, namely claims 13, 14, and 15 should be withdrawn. In fact, Applicants submitted in the Election filed July 10 of 2009 that each claim of elected Group I, i.e., claims 1-15, and 33, reads on the elected species (see Election of July 10, 2009, pg. 3, lines 14 and 15). Therefore, Applicants respectfully submit that the withdrawal of claims 13, 14, and 15 is improper. Rejoinder of claims 13, 14, and 15 is respectfully requested.

Claim Rejections under 35 U.S.C. § 102

The Office rejects claims 1, 6, 9, and 10 under 35 U.S.C. § 102(a) as being anticipated by WO 03/041091 to Nomura et al., with U.S. Patent No. 7,214,756 used as translation. The Office further rejects claims 1, 2, 3, 6, and 33 under 35 U.S.C. § 102(b) as being anticipated by JP 2002-309016 to Honma et al. The Office asserts that either Nomura et al. by itself or Honma et al. by itself teach all the features of the rejected claims. Applicants respectfully disagree.

As an initial matter, with respect to the rejection based on Nomura et al., Applicants hereby submit a verified translation of Japanese foreign priority document JP 2003-122766, filed April 25, 2003. Applicants respectfully request that the Examiner review the priority document to ascertain its impact on the outstanding art-based rejections, including the instant rejection under 35 U.S.C. § 102(a).

Further, Applicants respectfully submit that neither Nomura et al. (even though the rejection based on Nomura et al. is believed moot applicants submit the following or the sake of completeness) nor Honma et al. discloses the elements recited in claim 1, namely (emphasis added):

A proton conducting membrane comprising a support filled with a proton conducting structure (β) comprising an acid-containing structure containing an acid group, the support comprising an organic-inorganic composite structure (α) having a crosslinked structure formed by a metal-oxygen bond and an open-cell structure having internally-formed pores connected continuously to each other by said crosslinked structure.

Applicants submit that Nomura et al. and Honma et al. are silent with respect to any formation of pores. Applicants note that the emphasized pore feature of claim 1 does not constitute an inherent result of the proton conducting membrane when prepared according to the teachings of Nomura et al. or Honma et al.. Therefore, in the absence of any showing of “internally formed pores connected continuously to each other by said crosslinked structure,” as recited in independent claim 1, there can be no anticipation of the presently claimed invention. Accordingly, withdrawal of the anticipation rejection is respectfully requested.

Furthermore, addressing the rejection of claims 2, 3, and 6, the Office asserts on page 4 of the Action that the cross-linked structure of Honma et al. is the same as in the instant claims. Applicants respectfully disagree.

Applicants respectfully submit that the structures in Honma et al. are not the same as the structures of the instant claims. In this regard, Applicants note that the structures of present claim have a metal framework wherein two metal atoms are bridged by an oxygen atom or by at least one carbon atom. In contrast, Honma et al. discloses a framework that bridges two metal atoms by alkoxy groups. Such alkoxy groups are not present in the instant claim. Accordingly, Honma et al. does not anticipate the presently claimed structures. For at least this reason, withdrawal of the rejections is respectfully requested.

Claim Rejections under 35 U.S.C. § 103(a)

The Office rejects claims 4, 5, and 7-12 under 35 U.S.C. § 103(a) as being obvious over Honma et al. in view of U.S. Patent Application Publication No. 2004/0197613 to Curlier et al. The Office concedes that Honma et al. does not disclose the additional elements claimed in claims 4 and 5, further specifying the porosity and the size of the pores in the present claims (see Office Action, pg. 4, par. 10). The Office also concedes that Honma et al. does not disclose the amount of crosslinkage as claimed in claims 7 and 8. In order to cure this deficiency, the Office asserts that one of ordinary skill would be motivated to optimize the porosity and the amount of crosslinkage. Moreover, the Office concedes that Honma et al. fails to disclose the claimed formula of claims 9-12. In order to cure this deficiency, the Office relies on Curlier asserting that the silicon-containing acid group allegedly taught by Curlier et al. attached to the cross-linked material of Honma et al. would result in the structure of claim 12. Applicants respectfully disagree.

Applicants note that for a *prima facie* obviousness rejection, each element of the rejected claims must be either disclosed in the cited document or rendered obvious from the teaching by suggesting to modify the features in the citations or presenting an apparent reason to modify. Applicants note that there is nothing in Honma et al. that would give one of skill a reason to modify the disclosure of Honma et al. to arrive at the present invention.

As discussed above, the structures of Honma et al. and the present invention differ in their chemical build-up and there is nothing in Honma et al. that would suggest to one of ordinary skill to modify the structure of Honma et al. to arrive at the presently claimed structures.

Furthermore, Honma et al. does not discuss porosity or pores at all. Thus, there can be no reason to one of ordinary skill to recognize that this property is a deficiency that needs to be modified. Even assuming, for the sake of argument, that one of ordinary skill would recognize that porosity needs to be modified, the Office has the burden to explain why one would arrive at the porosity features that are claimed in claims 4 and 5, i.e.,

porosity falling within a range of 20 to 95% by volume and diameter of the pores between 0.01 and 10 μm . In the absence of such an explanation, there can be no *prima facie* case of obviousness.

Applicants further note that Curlier does not cure this deficiency. Therefore, even assuming, that combining Honma et al. with Curlier is proper, the combined documents do not show or render obvious all the claimed features of the present invention regarding porosity. In the absence of such a showing or suggestion, the obviousness rejection should be withdrawn.

Likewise with regard to the aspect of crosslinkage, the Office has the burden to explain that in the absence of explicit teaching from the cited documents, why would one of ordinary skill modify the crosslinkage of the cited documents and arrive at the particular range claimed by numerical formula (II) of claim 7. In the absence of such an explanation, there can be no obviousness. Accordingly, in view of the foregoing reasons, withdrawal of the obviousness rejection is respectfully requested.

Moreover, an obviousness rejection is moot in view of unexpected results. Applicants respectfully submit that the examples in the present specification describe the superior properties of the conductive membrane according to the present invention over the comparative examples, which are representative of conductive membranes conventionally known at the time the invention was made. In view of the unexpected results, Applicants respectfully request withdrawal of the obviousness rejection.

Double Patenting

Claims 1, 6, 9, and 10 are rejected on the ground of nonstatutory double patenting over claims 1, 2, 8, and 9 of U.S. Patent No. 7,214,756 to Nomura et al.

Applicants respectfully request that the Examiner hold this rejection in abeyance until allowable subject matter has been identified.

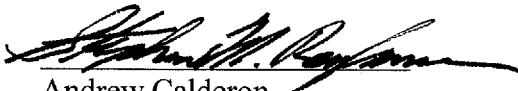
CONCLUSION

With the foregoing amendments and remarks, Applicants have addressed all rejections and respectfully request their withdrawal. Applicants believe that the present application is in condition for allowance.

Applicants believe that no additional fee is necessary. However, if a fee is deemed required for ensuring the pendency and consideration of this amendment, the undersigned authorizes the Office to charge Deposit Account No. 19-0089 any requisite fee.

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed telephone number.

Respectfully submitted,
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December 28, 2009
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